

IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

1. (currently amended) A communication system comprising:
a home network installed with a home agent for holding mobile terminal location information of a mobile terminal; and,
a visited network installed with a radio communications device for communicating with said a mobile terminal; and
gateway equipment in said ~~host~~ home network for forming an interface with said home network, wherein said radio communication device contains an access request transfer means for forwarding access requests from a said mobile terminal of said visited network to said gateway equipment, and
wherein said gateway equipment ~~comprises~~ contains:
a prefix ~~an identifier~~ request means for requesting ~~an identifier~~ a prefix for said mobile terminal from said home agent in response to an access request from said mobile terminal; and
~~an identifier~~ a prefix transfer means for receiving the requested prefix from said home agent and forwarding said ~~acquired identifier~~ the received prefix to said mobile terminal, and
wherein the prefix is used to generate a home address in said mobile terminal.

2. (currently amended) A communication system according to claim 1, wherein along with making an ~~identifier~~ a prefix acquisition request, said ~~identifier prefix~~ request means also requests acquisition of Domain Name Server (DNS) server information from said home agent, and

wherein said identifier prefix transfer means forwards the acquired DNS server information along with said ~~identifier prefix~~ to said mobile terminal.

3. (currently amended) A communication system according to claim 1, further comprising:

~~a~~ decision means for deciding whether or not authentication processing of said mobile terminal is required, utilizing said ~~a~~ source address of the access request from said mobile terminal moving in said host network; and

~~an~~ authentication means for starting authentication processing of said mobile terminal when ~~decided~~ said decision means decides that authentication processing is required,

wherein said ~~identifier prefix~~ request means makes a request to said home agent for acquisition of said mobile terminal ~~identifier prefix~~ after said authentication is successful.

4. (currently amended) A communication system according to claim 3, wherein said gateway equipment further comprises: a

location information holding means for holding location information on said mobile terminal in said visited network, ~~and~~

wherein said authentication means starts said authentication processing after said location information holding means has received a location registration request from said mobile terminal.

5. (original) A communication system according to claim 4, wherein said location information holding means holds location information on said mobile terminal after said authentication processing was successful.

6. (currently amended) A communication system comprising:
a home network installed with a home agent for holding mobile terminal
location information of a mobile terminal,
a visited network installed with a radio communications device for
communicating with a mobile terminal; and
gateway equipment in said home network for forming an interface with said
home network, wherein said radio communication device contains an access request
transfer means for forwarding access requests from said mobile terminal of said
visited network to said gateway equipment,

wherein said gateway equipment comprises:

a prefix request means for requesting a prefix for said mobile terminal from
said home agent in response to an access request from said mobile terminal, and

a prefix transfer means for receiving the requested prefix from said home
agent and forwarding the received prefix to said mobile terminal, according to claim 1,

wherein said mobile terminal comprises:

~~an identification information~~home address creation means for acquiring to
acquire said identifier prefix from said gateway equipment and ~~create~~creating a
mobile terminal ~~identification information~~home address; and

~~a binding information registration~~ means for registering information
corresponding to a mobile terminal home address created from said ~~identifier~~prefix
and identification information of said mobile terminal, ~~to~~ at a Domain Name Server
(DNS) server in a visited network, relay network or in a home network.

7. (currently amended) A communication system according to one
of claim 1, further comprising:

network management equipment connected to said ~~visited~~home network and
said visited network, wherein said home agent and said gateway equipment
comprise ~~an acquisition means for acquiring~~ from said network management
equipment, programs and data required for distributing ~~identifiers~~prefixes and
authenticating said mobile terminal.

8. (currently amended) A gateway equipment, installed in a visited
network containing a radio communications device for communicating with said ~~a~~
mobile terminal, for forming an interface with ~~the~~ a home network containing a home
agent for holding location information on said mobile terminal, ~~wherein~~ said gateway
equipment ~~comprises~~comprising:

~~an identifier~~a prefix acquisition request means for requesting acquisition of an ~~identifier~~a prefix for said mobile terminal from said home agent in response to an access request from said mobile terminal in said visited network; and

~~an identifier~~a prefix transfer means for receiving the requested prefix from said home agent and forwarding said acquired identifier ~~the received prefix~~ to said mobile terminal;

wherein the prefix is used to generate a home address in said mobile terminal.

9. (currently amended) A gateway equipment according to claim 8, wherein said ~~identifier~~prefix request means makes an ~~identifier~~a prefix acquisition request and a Domain Name Server (DNS) server information acquisition request to said home agent, and

wherein said identifier ~~prefix~~ transfer means forwards the acquired DNS server information along with said ~~identifier~~prefix to said mobile terminal.

10. (currently amended) A gateway equipment according to claim 8, further comprising:

a ~~decision~~ means for deciding whether or not authentication processing using ~~the a~~ source address for the access request from mobile terminal moving within said visited network is required; and

~~an authentication~~ means for starting authentication processing of said mobile terminal when said decision means decides ~~decided~~ that authentication is required,

wherein said ~~identifier-prefix~~ request means makes a request to said home agent to acquire the ~~identifier-prefix~~ of said mobile terminal, after said authentication was successful.

11. (currently amended) A gateway equipment according to claim 10, further comprising: a location information holding means for holding ~~aid~~ information of a location of said mobile terminal location information, wherein said authentication means starts said authentication processing after receiving a location registration request from said mobile terminal for said location information holding means.

12. (currently amended) A gateway equipment according to claim 11, wherein said location information holding means holds location information of said mobile terminal ~~location information~~ after said authentication was successful.

13. (currently amended) A communication method in a communication system ~~comprising~~ including a home network installed with a home agent for holding mobile terminal location information ~~and of a mobile terminal~~, a visited network installed with a radio communications device for communicating with ~~said a mobile terminal~~, and gateway equipment in said ~~host~~ home network for forming an interface with said home network, ~~wherein said communication method~~ comprising:

forwarding, by said radio communication device forwards an access request from said mobile terminal of said visited network to said gateway equipment, ~~and;~~
making, by said gateway equipment, ~~makes an~~ acquisition request to said home agent for an identifier a prefix for said mobile terminal, and forwards ~~said~~ forwarding an acquired identifier prefix to said mobile terminal; ~~and~~
creating, by said mobile terminal, ~~creates a~~ mobile terminal identification information home address based on said identifier prefix acquired from said gateway equipment, ~~and searches~~ searching said a Domain Name Server (DNS) terminal and forwarding forwards a packet addressed to said mobile terminal by registering mapping information along with said mobile terminal home address generated from said identifier prefix and said a mobile terminal identification information; in a DNS server within a relay network or home network.

14. (currently amended) A communication method according to claim 13, further comprising:
making, by ~~wherein~~ said gateway equipment, ~~makes a~~ DNS server information acquisition request and a identifier prefix request to said home agent, and forwards said acquired DNS server information and said identifier to said mobile terminal.

15. (currently amended) A communication method according to claim 13, further comprising:

~~deciding, by wherein said gateway equipment, decides whether or not~~
authentication processing is required using ~~the a~~ source address of the access
request from said mobile terminal moving within said visited network;

~~starting, by said gateway equipment starts the authentication processing for~~
the mobile terminal when ~~it is~~ decided ~~by said deciding step~~ that authentication is
required; and

~~requesting, by said gateway equipment, requests acquisition of an identifier a~~
~~prefix~~ for said mobile terminal from said home agent after the authentication was
successful.

16. (currently amended) A communication method according to claim 15,
~~wherein further comprising:~~

~~holding, by said gateway device hold~~~~equipment~~ the location information of
said mobile terminal in said visited network; and

~~starting, by said gateway equipment, starts said authentication processing~~
after receiving a location registration request from said mobile terminal.

17. (currently amended) A communication method according to
claim 16, ~~wherein further comprising:~~

~~holding, by said gateway device hold~~~~equipment~~ said mobile terminal location
information after said authentication was successful.

18. (currently amended) A communication method according to claim 13, wherein further comprising:
acquiring, by said mobile terminal, acquires said identifier prefix from said gateway device equipment and creating a creates identification information home address for said mobile terminal, and
registering registers mapping information with said mobile terminal home address generated from said identifier prefix and said mobile terminal identification information, in a DNS server within a home network, or a visited network or relay network.

19. (currently amended) A communication method according to claim 13, comprising wherein said communication system further includes a network management equipment connected to said home network and said visited network, wherein said home agent and said gateway equipment acquire programs and data from said network management equipment required for distributing the identifiers prefixes and authenticating the mobile terminals.

20. (currently amended) An authentication method for a mobile terminal used in a communication system which includes comprising a home network installed with a home agent for holding mobile terminal location information of a mobile terminal, and, a visited network installed with a radio communications device for communicating with said a mobile terminal, and gateway equipment in said visited network for forming an interface with said home network, wherein said

radio communication device forwards an access request from said mobile terminal of said visited network to said gateway equipment, said authentication method comprising: and

making, by said gateway equipment, ~~makes an~~ acquisition request to said home agent for ~~an identifier~~ a prefix for said mobile terminal, ~~forwards said~~ forwarding an acquired identifier prefix to said mobile terminal, and ~~authenticates~~ authenticating said mobile terminal;

wherein the prefix is used to generate a home address in said mobile terminal.

21. (currently amended) An authentication method according to claim 20, wherein further comprising:

deciding, by said gateway equipment, ~~decides whether or not~~ authentication processing is required using ~~the a~~ a source address of the access request from said mobile terminal moving within said visited network, and

performing, by said gateway equipment, ~~performs~~ authentication processing according to the method in claim 20, when it is ~~it is~~ decided that authentication is necessary.

22. (currently amended) An authentication method according to claim 21, wherein further comprising:

holding, by said gateway device ~~hold~~ equipment the location information of said mobile terminal in said visited network, and

performing, by said gateway equipment, performs authentication processing according to the method in claim 21 after receiving a location registration request from said mobile terminal.

23. (currently amended) An authentication method according to claim 11, wherein further comprising:
holding, by said gateway device, said mobile terminal location information after said authentication was successful.

24. (currently amended) An authentication method ~~according to claim 20~~ for a mobile terminal used in a communication system which includes a home network installed with a home agent for holding mobile terminal location information of a mobile terminal, a visited network installed with a radio communications device for communicating with a mobile terminal, and gateway equipment in said visited network for forming an interface with said home network, wherein said radio communication device forwards an access request from said mobile terminal of said visited network to said gateway equipment, said authentication method comprising:
making, by said gateway equipment, an acquisition request to said home agent for a prefix for said mobile terminal, forwarding an acquired prefix to said mobile terminal, authenticating said mobile terminal; wherein

~~acquiring, by said mobile terminal, acquires said identifier prefix from said gateway device equipment and creates~~creating a identification information home address for said mobile terminal; and

~~registering registers~~ mapping information with said mobile terminal home address generated from said ~~identifier prefix~~ and said ~~a~~ mobile terminal identification information, in a DNS server within a home network, or a visited network or relay network.

25. (currently amended) An authentication method according to claim 20, ~~comprising wherein said communication system further includes a network management equipment connected to said home network and said visited network, wherein said home agent and said gateway equipment acquire programs and data from said network management equipment required for distributing the identifiers~~prefixes and authenticating ~~the~~ mobile terminals.

IN THE ABSTRACT

Please amend the Abstract as attached to the Substitute Specification.